

ARB Fact Sheet: Air Pollution and Health

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Despite significant success in reducing overall pollution levels, air pollution continues to be an important public health problem. Air monitoring shows that over 90 percent of Californians breathe unhealthy levels of one or more air pollutants during some part of the year. Health-based ambient air quality standards set by the California Air Resources Board (ARB) identify outdoor pollutant levels that are considered safe for the public - including those most at risk of adverse effects with exposure to air pollution, such as children, the elderly, and people who are active outdoors. The ARB has set standards for eight "traditional" pollutants, such as ozone and particulate matter. In addition to setting standards, the ARB identifies other air pollutants as toxic air contaminants (toxics) - pollutants that may cause serious effects with long-term exposure, such as cancer, when exposure level is low. Most toxics have no known safe levels and some may accumulate in the body from repeated exposures. The Board has identified about 200 pollutants as toxics, and measures continue to be adopted to reduce emissions of toxics. Both traditional pollutants and toxic air contaminants are measured statewide to assess the success of programs for improving air quality. The ARB works with local air pollution control districts to reduce air pollution from all sources.

What are the health effects of some common air pollutants?

The table below shows the health effects of some of the common pollutants found in our air and examples of some of the sources of these pollutants.

POLLUTANT	HEALTH EFFECTS	EXAMPLES OF SOURCES
Particulate Matter (PM2.5 and PM10: less than or equal to 2.5 or 10 microns, respectively)	<ul style="list-style-type: none"> • Hospitalizations for worsened heart diseases • Emergency room visits for asthma • Premature death 	<ul style="list-style-type: none"> • Cars and trucks (especially diesels) • Fireplaces, woodstoves • Windblown dust from roadways, agriculture and construction
Ozone (O ₃)	<ul style="list-style-type: none"> • Cough, chest tightness • Difficulty taking a deep breath • Worsened asthma symptoms • Lung inflammation 	<ul style="list-style-type: none"> • Precursor sources*: motor vehicles, industrial emissions, and consumer products
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Chest pain in heart patients** • Headaches, nausea** • Reduced mental alertness** • Death at very high levels** 	<ul style="list-style-type: none"> • Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Increased response to allergens 	<ul style="list-style-type: none"> • See carbon monoxide sources

Toxic Air Contaminants	<ul style="list-style-type: none"> • Cancer • Chronic eye, lung or skin irritation • Neurological and reproductive disorders 	<ul style="list-style-type: none"> • Cars and trucks (especially diesels) • Industrial sources, such as chrome platers • Neighborhood businesses, such as dry cleaners and service stations • Building materials and products
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*Ozone is not generated directly by these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

**Health effects from CO exposures occur at levels considerably higher than ambient.

If you have questions or comments regarding this web page, please contact [Barbara Weller](#) at (916) 445-1324.

ARB Fact Sheet

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